



# National Weather Service Spring Flood Outlook

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# Upfront Information



- There is a **below-normal risk** for spring flooding this year.
- Flooding this spring will be largely dependent on the location and intensity of additional precipitation and thunderstorms.
- The next outlook will be issued February 24<sup>th</sup>





# Spring Flood Outlook Factors

As of February 10<sup>th</sup>



Flood Risk Contribution Factor	Contribution to Flood Risk
<b>Snowpack (North and South Dakota)</b>	Below-Normal
<b>Snowpack (in Nebraska and Iowa)</b>	Below-Normal
<b>Snowpack (Missouri River headwaters)</b>	Below-Normal
<b>Snowpack (Platte River headwaters)</b>	Normal
<b>Soil Moisture</b>	Below-Normal
<b>Streamflow</b>	Below-Normal
<b>Frost Depth</b>	Normal
<b>Precipitation Outlook</b>	Below-Normal





# Flood Risk by River Basin

As of February 10<sup>th</sup>



River Basin	Flood Risk
Niobrara River	Below-Normal
Missouri River	Below-Normal
Platte River	Below-Normal
Elkhorn River	Below-Normal
Big Blue River	Below-Normal
Salt Creek	Below-Normal
Wahoo Creek	Near-Normal
Nishnabotna River	Below-Normal

Rivers and associated tributaries not listed above are also below-normal.



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# Summary



- The overall flood risk for this spring is **below-normal** due to:
  - Below-normal soil moisture and winter precipitation, lack of snow cover, and ongoing drought conditions.
  - Mountain snowpack is below-normal in the Missouri River headwaters and near-normal in the Platte River headwaters.

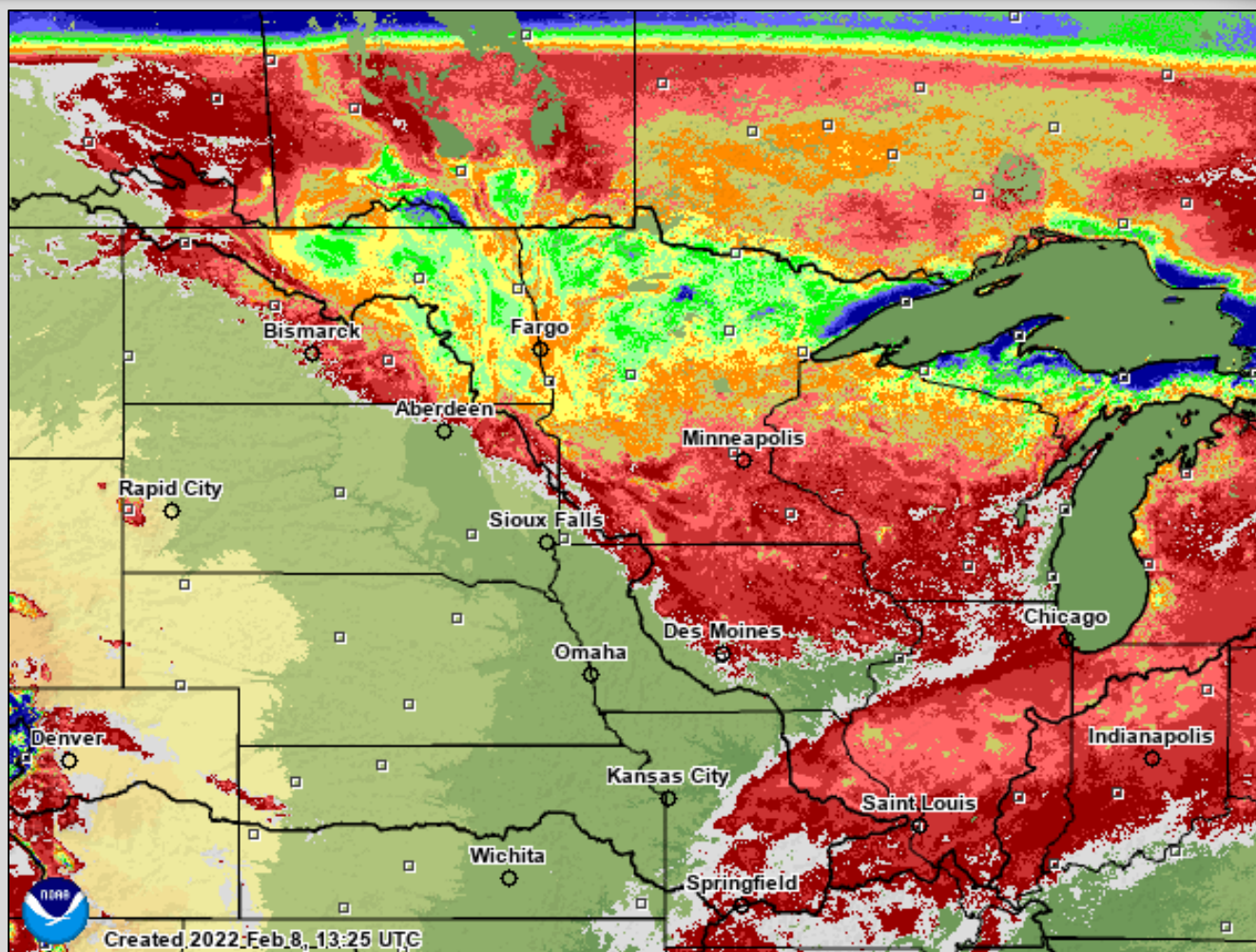
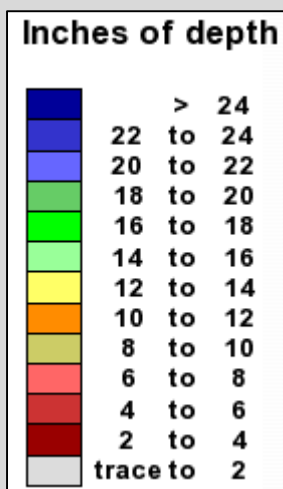




The following slides provide additional details for each flood risk.



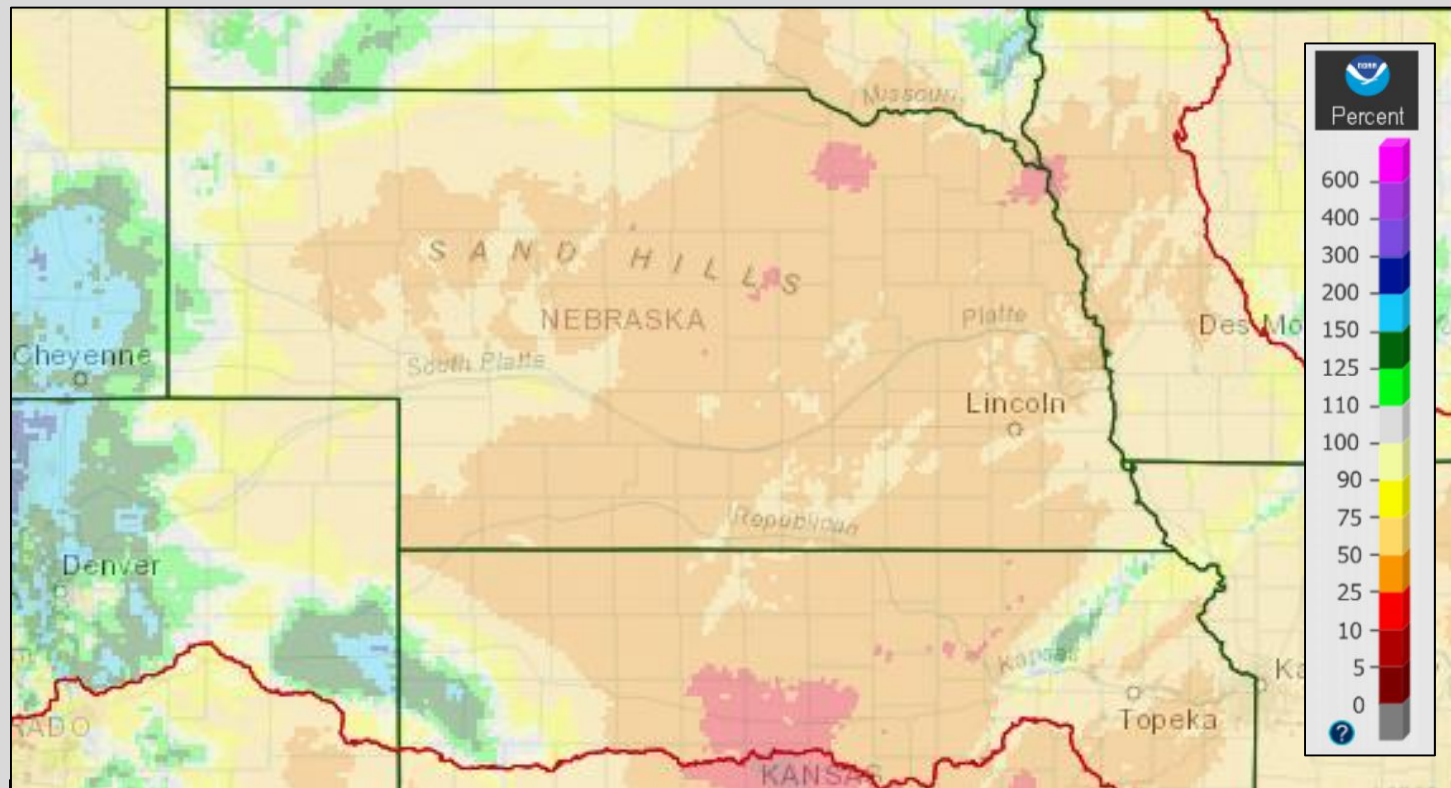
# Plains Snowpack



Most areas of the Plains within the Missouri River basin are snow-free.



# Winter Precipitation (compared to normal as a percentage)

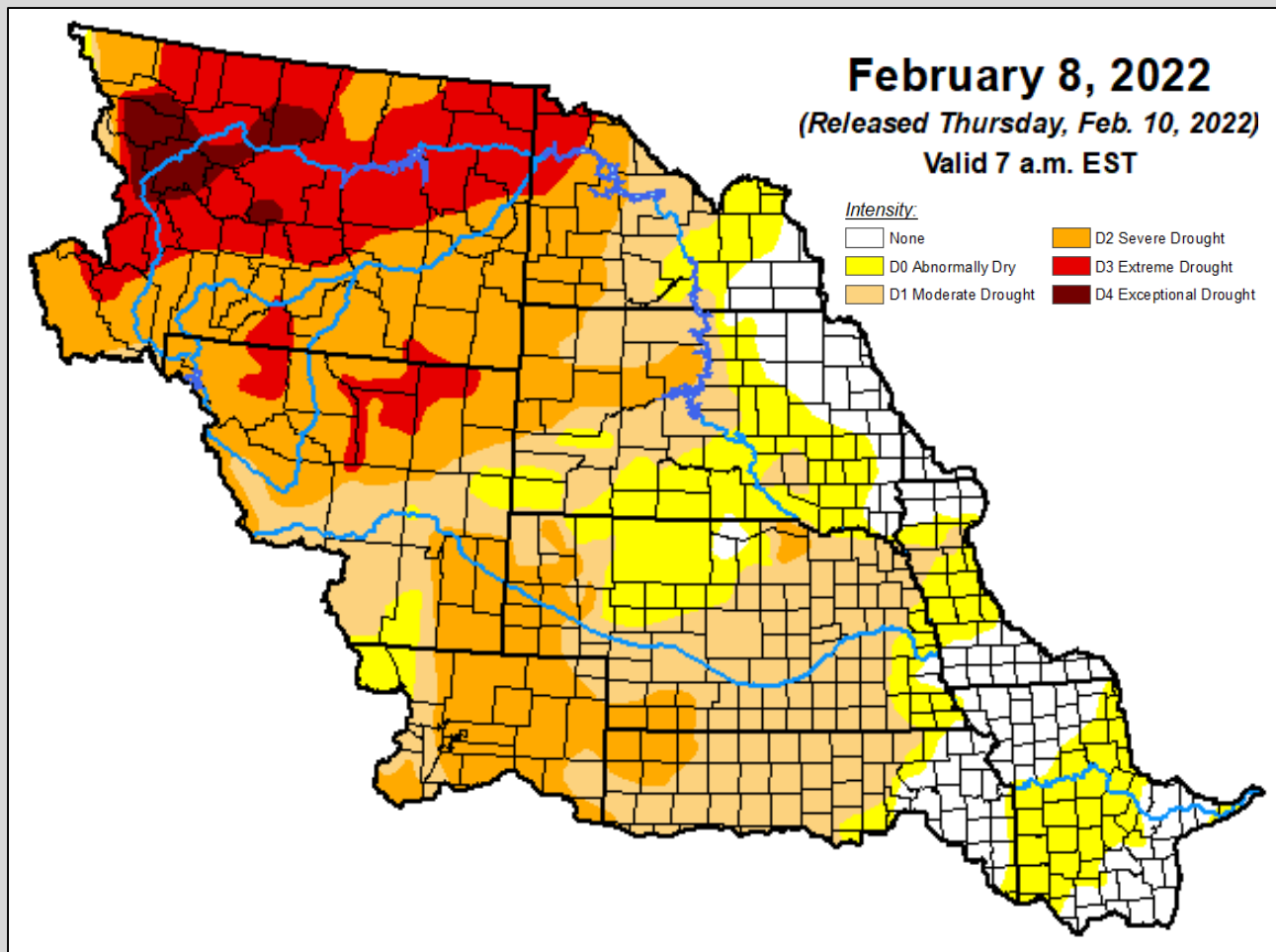


- Precipitation the past three months has been below-normal.

Precipitation has been well below-normal this winter.



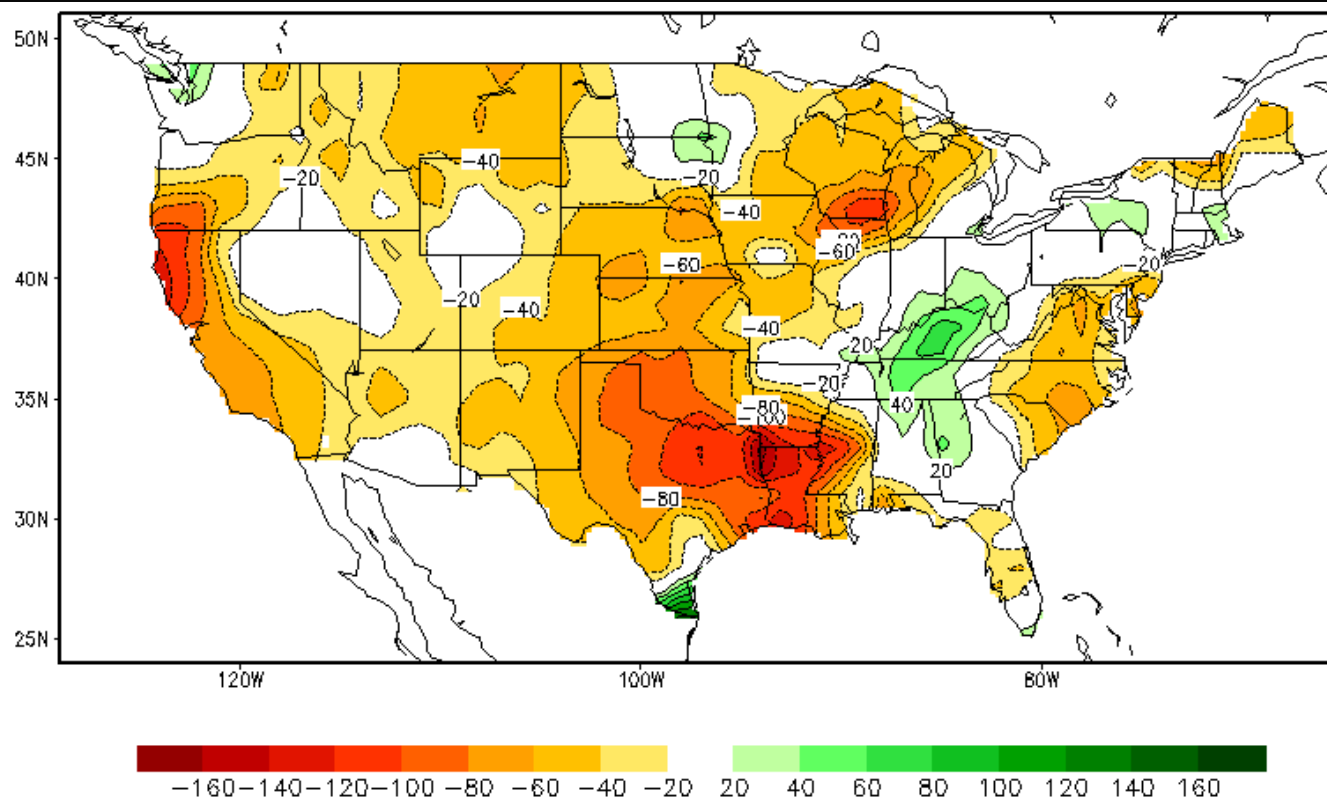
# Drought Status



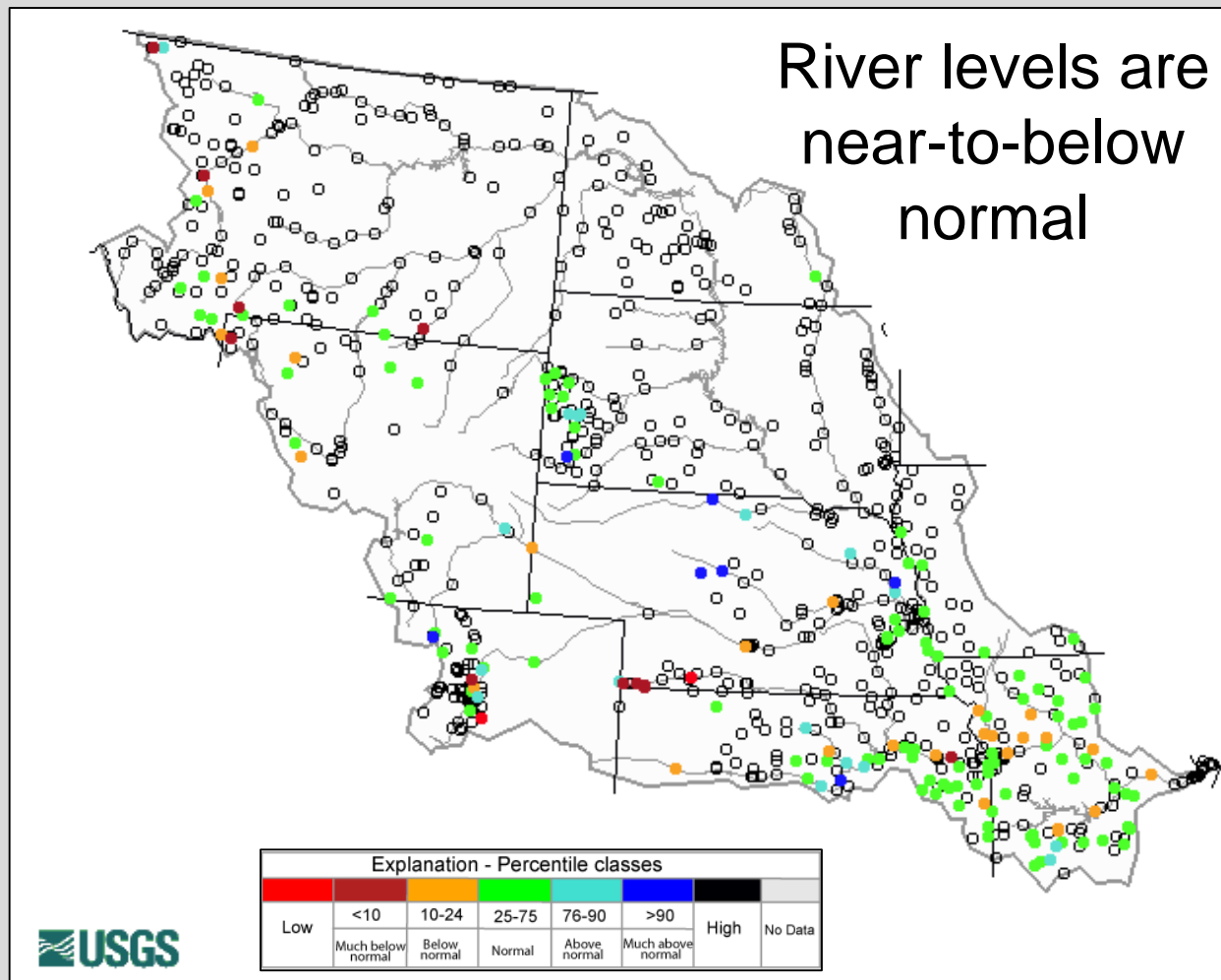
- Much of the Missouri River basin is in moderate to severe drought. This “dry condition” acts to lower the overall flood risk.

# Soil Moisture

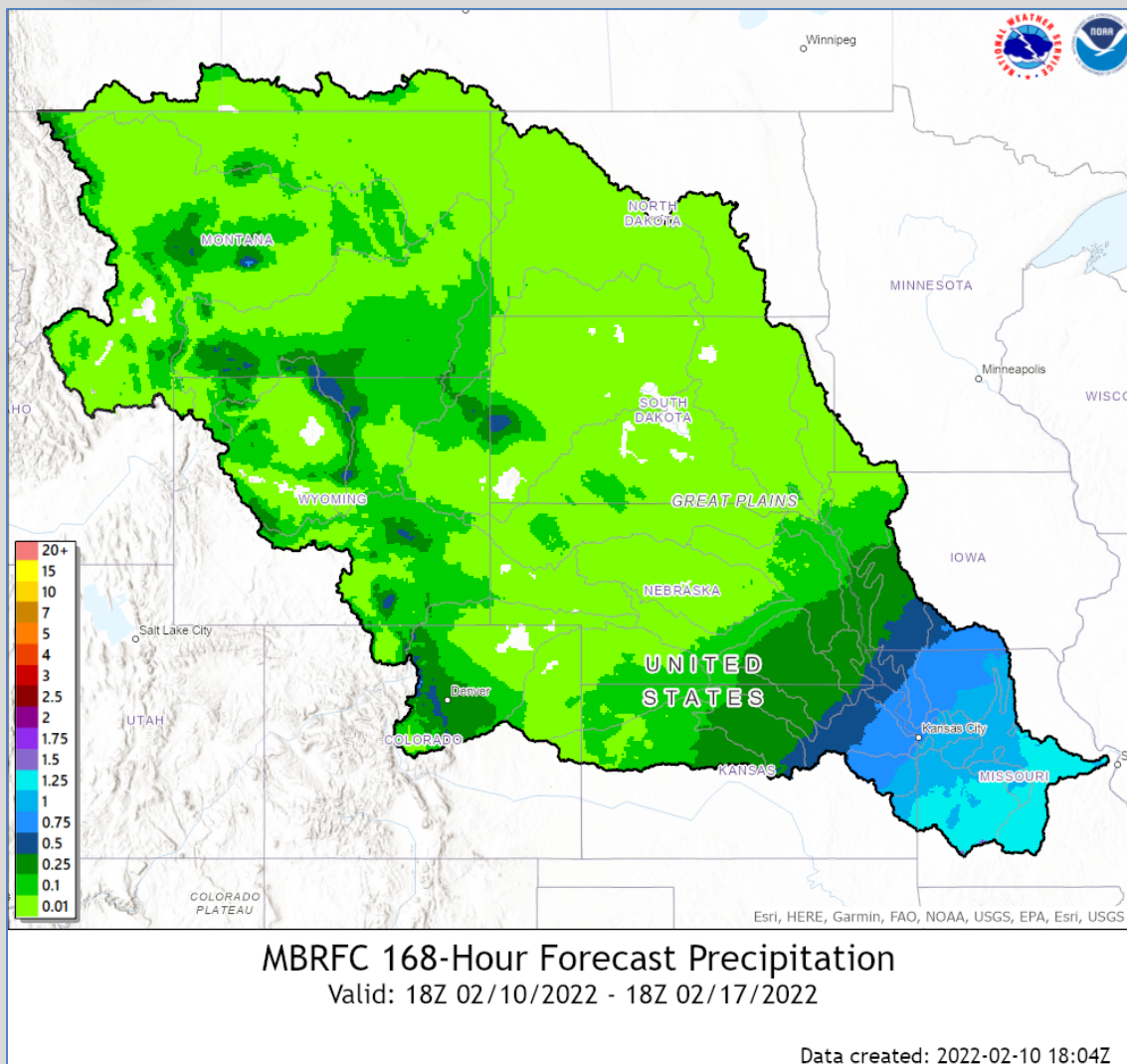
Soil moisture values are below-normal for eastern Nebraska and western Iowa.



# Current Streamflow



# Precipitation over the next 7 days

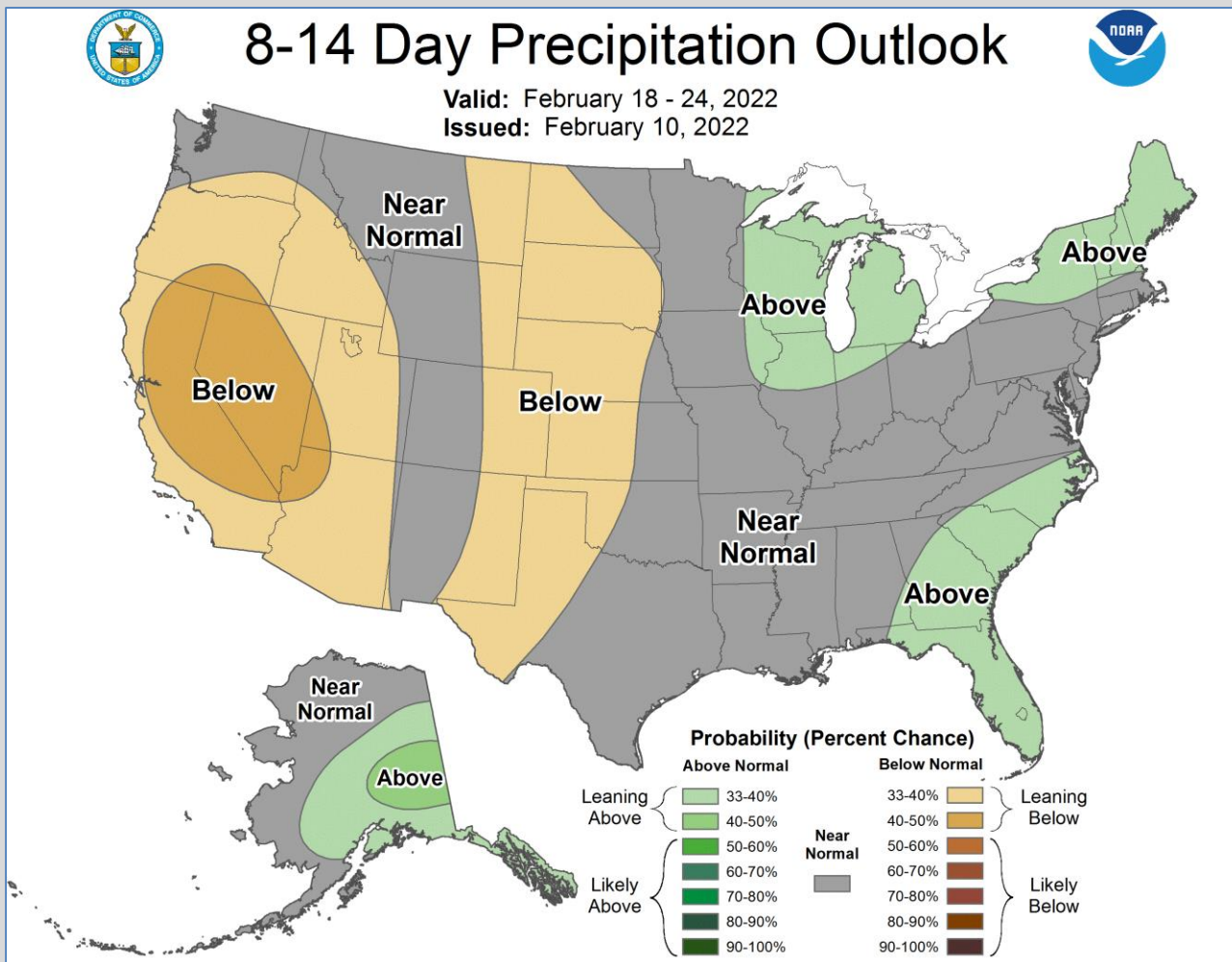


- Very little precipitation is expected the next 7 days.



# Weather Outlook

## 8-14 Day Outlook



Precipitation will be below-normal for February 17<sup>th</sup> to the 23<sup>rd</sup>.

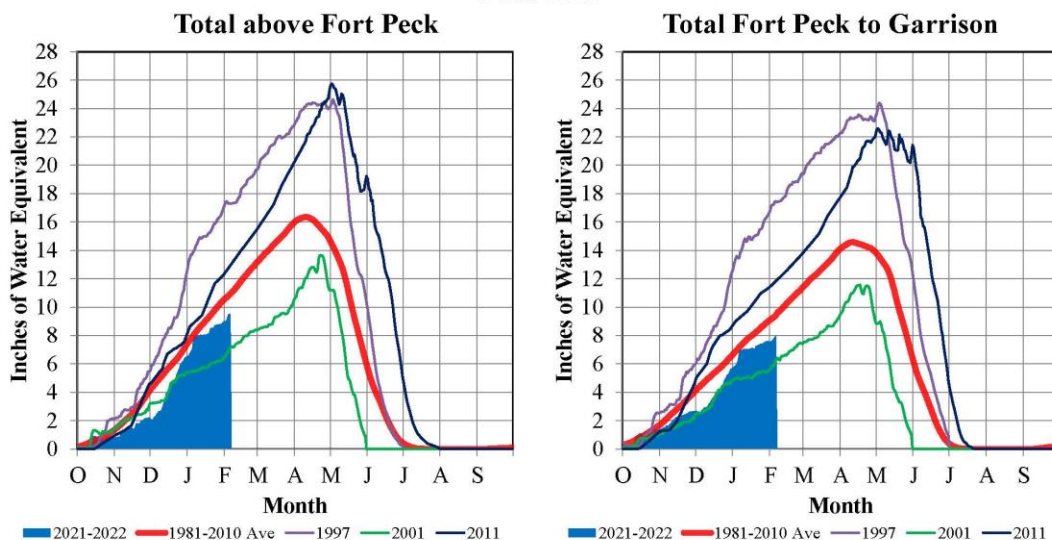


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## Missouri River Basin – Mountain Snowpack Water Content 2021-2022 with comparison plots from 1997, 2001, and 2011

6-Feb-2022



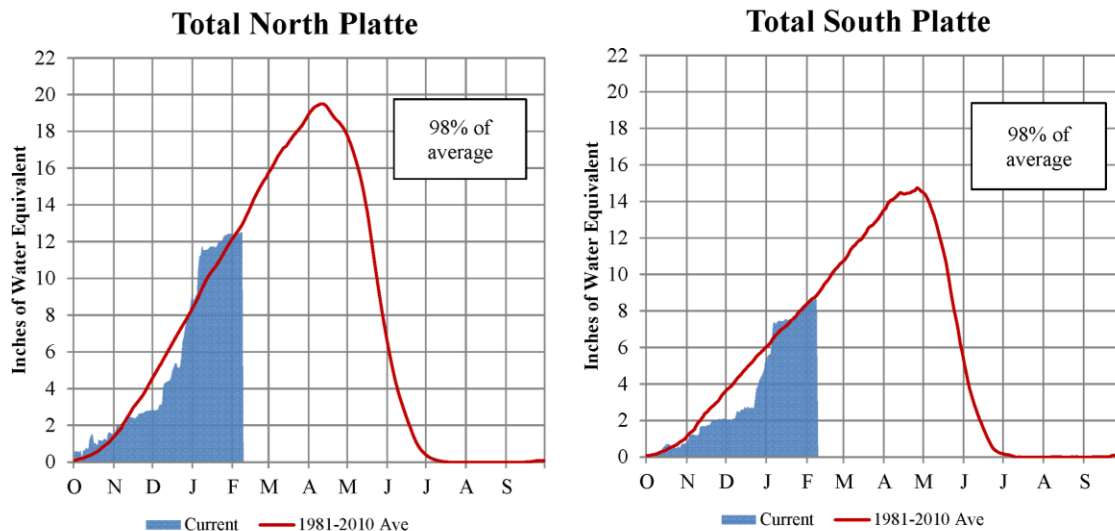
On February 6, 2022 the mountain Snow Water Equivalent (SWE) in the “Total above Fort Peck” reach is 9.5” and 87% of the (1981-2010) average. The mountain SWE in the “Fort Peck to Garrison” reach is 7.9” and 84% of the (1981-2010) average. The normal peak for both reaches occurs near April 15. The 30-year average lines (1981-2010) for both reaches will be updated when the data becomes available to (1991-2020).

Provisional data. Subject to revision.

- Mountain snowpack in the Missouri River headwaters is below-normal.

## Platte River Basin - Mountain Snowpack Water Content Water Year 2021-2022

February 08, 2022



The North and South Platte River Basin mountain snowpacks normally peak near April 15 and the end of April, respectively. As of February 8, 2022, the mountain snowpack SWE in the "Total North Platte" reach is currently 12.5", 98% of the (1981-2010) average. The mountain snowpack SWE in the "Total South Platte" reach is currently 8.6", 98% of the (1981-2010) average. The 30-year average lines (1981-2010) for both reaches will be updated when the data becomes available to (1991-2020).

Source: USDA, Natural Resource Conservation Service

Provisional Data. Subject to Revision

- Mountain snowpack in the Platte River headwaters is normal.



# Summary



- The overall flood risk for this spring is **below-normal** due to:
  - Below-normal soil moisture, lack of snow cover, below-normal winter precipitation and ongoing drought conditions.
  - Mountain snowpack is below normal in the Missouri River headwaters and near-normal in the Platte River headwaters.





# National Weather Service Spring Flood Outlook



For questions & additional information:



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